liability to pulmonary catarrh. Nor should ether be used in operations upon the face or at night (danger of fire). Mixed anæsthesia—that is, chloroform preceded by injections of morphine and atropine—has been discarded because of its dangers. With ether the dangers are easily detected and combated; with chloroform the reverse is true.

M. CHAMPIONNIÈRE states that ether can be annoying to the surgeon in that he may exhale its vapor for twenty-four hours. The anæsthesia is less perfect, the after-vomiting is as frequent, and the secondary excitement more persistent, and it gives rise to great thirst. On the other hand, the dangers are less grave, its elimination easier, and the anæsthesia is quicker.

M. QUENU employs ether for short operations and for patients with broken-down nervous system.—*Journal des Praticiens*, 1895, No. 22, p. 346.

[While in the main the views expressed above are correct, we are strongly of the opinion that renal disease is a valid contraindication to the use of ether, and that in this instance chloroform is preferable.—R. W. W.]

SOME NEW VASO-DILATORS.

DR. J. B. BRADBURY has investigated erythrol and mannitol nitrates; also those of the sugars: dextrose, levulose, and saccharose nitrates. These are less soluble than other nitrates, and therefore have a correspondingly weaker effect, but their action is more prolonged. Considering the first two named above, their therapeutic indications can be given as chiefly when the heart is laboring under increased work imposed upon it by contracted arteries. The difficulty hitherto has been not so much to reduce arterial tension as to keep it constantly below a certain level. Both nitroglycerin and sodium nitrite have been used, but their administration has been attended with some inconvenience, notably that their action is so transient that the doses must be repeated at two-hours' intervals in order to produce continuous low tension. On the other hand, with the substances above named, the tension is not brought so low, but the reduction is of longer duration and the pressure is less liable to fluctuation. Further, they are free from poisonous properties, a quality readily explained by their slight solubility. The conditions under which these remedies may be used are cardiac pain, chronic Bright's disease, aneurism, Raynaud's disease, dyspnœa, headache, nervous diseases, as migraine and neuralgia, and various forms of poisoning, as from opium and coal-gas, vomiting from pregnancy and sea-sickness, lienteric diarrhœa, diabetes mellitus, and hysterical paralyses. The dose of the solid organic nitrate may be taken as one grain, but more may be given if necessary in pill, tablet, or in alcoholic solution. The latter is preferred; of the erythrol nitrate, 1 to 60 aqueous solution, in drachm doses. Of the mannitol nitrate, 1 to 100 aqueous solution, in dose of from one and a half to two drachms. Both solutions, thus made, are stable and free from irritating properties.—*The Lancet*, 1895, No. 3768, p. 1205.

THE PHARMACOLOGY OF THE IPECACUANHA-ALKALOIDS.

DR. ROBERT B. WILD, from his observation, sums up the action of cephæline and emetine hydrochlorides as follows: Both possess a powerful emetic action; the emetic dose of the latter was, however, about double that of the former. In non-emetic doses the degree of nausea produced by cephæline was also about double that produced by emetine; *e. g.*, the intensity and duration of nausea following cephæline were much the same as that following double the amount of emetine. Both alkaloids lowered arterial tension, and little difference was apparent in small doses, but the depression produced by cephæline was less than that produced by the larger emetic dose of emetine; cephæline appeared, therefore, to be distinctly preferable where a non-depressing emetic was desired. Both alkaloids caused contraction of the bloodvessels after destruction of the brain and spinal cord, but emetine was distinctly more active than cephæline; 1 in 10,000 of the latter produced little if any effect, while 1 in 20,000 of emetine was followed by marked contraction. On the heart no appreciable difference could be made out, both produced slowing, weakening, and diastolic arrest of the isolated organ; recovery was easily effected when the poison was removed. It is doubtful whether the drugs in the doses administered to man could affect the heart directly, but the fact that 1 in 20,000 caused diastolic arrest in forty-six minutes renders caution necessary in giving large doses of the alkaloids. Both acted as muscle-poisons, but cephæline had the greater toxic power, and also caused irritation of the motor nerve-endings and contracture. On the secretions, salivation was well marked whenever there was nausea. Emetine caused a flow of watery mucus from the nasal mucous membrane when a full dose was given; this was not noticed after cephæline. It is possible that the expectorant action of ipecacuanha is due to a similar action of emetine upon the other portions of the respiratory mucous membrane. Intestinal peristalsis and a loose motion at times followed the administration of either alkaloid; there was never any marked purgation. No effect was noticed upon the secretions of the skin, nor upon the amount of urine. Assuming the view that emetine is methyl-cephæline to be correct, the chief effect of the addition of the methyl group was to reduce markedly the action of the compound upon the convulsive or vomiting centre in the medulla oblongata, and also to diminish the irritating effect on motor nerve-endings. The methyl compound had, on the other hand, a more powerful action as a local vaso-constrictor. It seems probable that in cephæline we have a powerful and certain emetic, singularly free from depressing effects when given in doses of from one-twelfth to one-sixth of a grain; its action is, however, too slow to prove of much service in cases of poisoning, but in all other cases where emesis is desired it appears well worthy of trial. In acute catarrhal and febrile conditions as an expectorant, and for all the uses of ipecacuanha when vomiting is not desired, emetine in small doses seems likely to prove of considerable value, and also as an emetic in larger doses, from one-sixth to one-third of a grain, when a more depressing action is required. The powerful local constricting effect upon bloodvessels may also prove useful in hyperæmic and inflammatory conditions.—*The Lancet*, 1895, No. 3769, p. 1274.

ANTI-STREPTOCOCCUS SERUM.

DR. GEORGE G. VAN SCHAICK reviews the literature and states that the immunization of animals by means of toxins taken from ordinary cultures